Women's Health and Nutrition

Women's Health Beyond Reproductive Age: The Picture in Developing Countries

Mary Eming Young, M.D.
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This report is one of a series of working papers prepared for the World Bank's Women's Health and Nutrition Work Program

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THE PICTURE IN DEVELOPING COUNTRIES

by

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POPULATION, HEALTH AND NUTRITION DEPARTMENT
THE WORLD BANK

WOMEN'S HEALTH BEYOND REPRODUCTIVE AGE

Executive Summary

Background

Health problems of older women will become an increasingly important issue in developing countries partially because of the sheer increase in absolute numbers. Today, two out of three of the world's 469 million women older than 50 already reside in developing countries. By 2020 three out of four will reside in developing countries, an absolute increase of 408 million.

It is imperative to keep in mind the heterogeneity of developing countries. Older women constitute a distinct population that requires interventions very different from a population of younger women, who need an emphasis on maternity care. Obviously health problems of women are not homogeneous and cannot all be addressed through the traditional maternal and child health services.

The pattern of the health problems older women face reflects to a large extent the level of development of their region and country. Additionally, a woman's well-being is a result of all her previous experiences, including factors such as urban or rural residence, marital status, number of children, education, income, and nutrition. Furthermore work has a tremendous influence on women's physical and mental health. Indeed, occupational health problems are emerging as a result of the increased number of women in urban industrial jobs.

This report confines the discussion of women's health to the major causes of disease burden, with the recognition that this is a narrow description of women's well-being. It presents possible policy directions and programs for prevention of mortality and morbidity among women older than 50 according to the typology of the country in which they reside.

Key Problems

The main diseases affecting women older than 50 in developing countries are predominantly chronic diseases such as cardiovascular and cerebrovascular diseases, cancer, injuries, and mental health problems, while infectious and parasitic diseases predominate to a substantial extent in low-income developing countries. The World Development Report 1993, estimates that cardiovascular (including cerebrovascular) diseases accounted for 38.9 million disability-adjusted life-years lost (DALYs); cancer, 14.4 million; infectious and parasitic diseases; 10.2 million; neuro-psychiatric diseases, 7.4 million; digestive disorders, 5.1 million; and injuries, 4.7 million. Loss of visual acuity and hearing, osteoporosis, malnutrition, and anemia also contribute to substantial morbidity. In some developing countries, diabetes is becoming a leading cause of morbidity among the older population.

Strategy and Intervention Options

Many developing countries have started to deal with the needs of the older people, even though a comprehensive strategy is not yet widely implemented by most governments. A lesson learned from countries that are dealing with the needs of the older people, is to promote community participation and to increase women's capacity for self help. For example, HelpAge India, has emphasized educating and recruiting young people and children to work with older people and to take a responsible part in fund-raising programs. This concept has had similar success in the varying cultures of Sri Lanka, Kenya, and Colombia. Another example is the Center for the Welfare of the Aged in India, which promotes community-based services such as day centers for elderly people, often run by the elderly people themselves.

Planning for their care will need to take into consideration differences in urban and rural women cohorts. In rural areas emphasis on risks of undernutrition and infectious diseases is needed. In urban areas, the focus should be on health education for self care to manage chronic diseases. In general, the policy focus needs to shift towards health promotion, prevention and health education, at the national level and introduced in the communities. Some of the key preventive measures require changing behaviors early in life. Selected cost effective interventions, such as cervical cancer screening, could be introduced in phases. First target the program in limited areas to screen women considered to be at high risk, then expand services to more women in more areas and integrate the screening program into existing health services.

Policy and Program Recommendations

Ways to improve older women's health and well-being vary according to a particular country's economic, epidemiological, demographic, infrastructural, and cultural conditions, and ultimately influence the feasibility and effectiveness of the available public health interventions. While it is not possible to provide a blueprint for the health care of older women (or for the older population in general). The paper discusses approaches in **three different settings** for which planners and managers can start assessing needs and implement a plan for the health care of older women.

Setting A: This setting includes the low-income countries in Africa, Asia, and Latin America and the Caribbean, such as Kenya, Nigeria, Pakistan, India, Egypt, and Bolivia, where government hospitals and clinics are often insufficient even for the provision of acute medical care and maternal health care. Moreover, primary care to meet basic health care needs in rural areas is scarce or nonexistent and there is a great disparity in the distribution of health facilities between rural and urban areas. Private providers consist mainly of religious nongovernmental organizations in Africa and private doctors and unlicensed practitioners in South Asia. Public spending on health in these countries is skewed toward high-cost hospital services that benefit mainly the better-off urban population. Furthermore, national policies to assist the elderly and community awareness of their needs are lacking. The elderly tend to be isolated, undernourished, and dependent on extended families.

Priority: Increase government and public awareness of the health problems of the aging population and develop a national strategy to focus on older women in rural and urban poor areas (see box A).

Setting B: This setting includes most of the middle-income countries in Asia, Latin America and the Caribbean, and the Middle East. Both public and private services are available but are underutilized. Primary care services are available but are poor in quality and scarce in rural areas. There is little recognition of the needs of the elderly, and there are too few government and private programs designed to help the elderly. Resources are invested disproportionally in institutional care rather than in services for the community and home. There is a lack of rehabilitation, physical therapy, and mental health care. Programs for health promotion and education are minimal, and those that exist are not geared to the specific needs of the elderly. Home care and home help services are not recognized as a "right" and hence are not included in the country's budget. Social insurance is available only for those employed by the government or major employers. There is also a paucity of legislation defining needs, entitlements, and mandated services for the elderly.

Attitudes toward the elderly are becoming more negative as result of urbanization and modernization. Furthermore, rural areas will have a higher proportion of elderly due to migration of young workers to urban areas. Urban housing problems will worsen.

People in general are unaware of the responsibility for improving their own health. Insufficient attention is given to nutrition of the elderly. Arteriosclerosis is responsible for much disability and death in later life. Recognition of the necessity for health promotion programs is growing but systems are not yet widespread.

Priority: Orient the government and the private sector to regard all efforts to improve later life as a medium-term investment in human capital (see box B).

Setting C: This setting includes the former socialist countries in eastern and central Europe, former USSR, and China. These countries have an extensive network of hospitals, rehabilitation facilities, and public health facilities. However, the health care delivery system is inefficient and ineffective. Governments have been slow to regulate workplace safety and environmental pollution and have put little emphasis on health promotion through campaigns against unhealthy behaviors such as heavy cigarette and alcohol consumption. In recent years the collapse of social safety nets has led to problems in providing assistance to the disabled and to people unable to support themselves. In China the collapse of cooperative medical insurance has led to deterioration in the provision of preventive health services.

Priority: Promote and maintain independent functioning of the elderly (see box C).

BOX A: Policy Directions and Programs for Countries Described in Setting A

Community-Based Services

- Promote traditional family attitudes toward the elderly, particularly older women. Maintain and extend customs by which the elderly use some of their traditional roles in the community.
- Increase the capacity and role of women in identifying, promoting and valuing positive health behavior, such as adequate nutrition and hygienic measures.

Education and Training

- Incorporate information about the normal aging process in mass literacy campaigns.
- Introduce geriatrics in undergraduate medical education.
- Train community health workers in the care of the elderly with a focus on family participation.

Organization and Finance

- Establish national-level leadership focused on the needs of the elderly.
- Establish the objectives and structure for health promotion and health care of the elderly.

Research and Evaluation

- Evaluate policies and health care objectives to meet changes expected by 2010.

Improving health programs for older women

- Initiate health education programs under government and voluntary-agency sponsorship with emphasis on promoting positive attitudes toward the elderly.
- Develop cadres of health professional and paraprofessional workers committed to working with the elderly.
- Encourage nongovernmental organizations to initiate community programs oriented toward inclusion of older women.
- Use primary care as the basic approach, and existing village women's organizations as the entry points, for chronic disease prevention programs.
- Educate women on the importance of their own good nutrition and behavioral risk factors.

BOX B: Policy Directions and Programs for Countries Described in Setting B

Community-based services (focus on prevention)

- Increase emphasis on community-based programs for health care for the elderly.
- Institutionalize measures to assist local authorities and voluntary organizations to expand needed services for the elderly.
- Emphasize health promotion and disease prevention in community health, social services, and occupational settings.
- Promote an interdisciplinary approach to services, by including medical, social, and psychological services in the care for older women.
- Provide secure and suitable housing such as rooming units for the elderly to enable them to stay close to their families.
- Encourage and coordinate mutual help groups so that the elderly can rely to some extent on their own resources and on each other.

Education and Training

- Introduce into health workers' curricula the safe and appropriate dosage of drugs for the elderly.

Organization and Finance

- Provide the needy elderly with some form of health insurance.

Research and Evaluation

- Expand surveillance data gathering to document older women's health and health care needs.
- Evaluate ongoing programs directed at improvement of the health of older women.

Improved Health Programs for Older Women

- Educate the adult working population on health promotion measures such as adequate nutrition and physical activity.
- Introduce health counselling and screening programs,e.g. hypertension at the work place.
- Implement cervical cancer screening programs according to local conditions.
- Establish day care centers and homes for the aged.
- Introduce palliative measures and hospice care for the management of terminally ill patients.
- Promote health education programs at the workplace.
- Conduct vision screening at the workplace and in the community.
- Educate women on the safe and effective use of drugs such as antidepressants and tranquilizers, particularly if available without a physician's prescription.
- Promote compliance with nutritional counseling and prescribed drugs.

BOX C: Policy Directions and Programs for Countries Described in Setting C

Community-based services (focus on prevention and self care)

- Develop a more comprehensive strategy for women's health, with particular attention to mental health and the prevention and treatment of chronic diseases.
- Increase focus on responsibility for self-care in preventing chronic diseases.
- Redirect focus from hospital based to community-based care for the elderly.
- Promote the strengthening of a spectrum of support services--home helps, home nursing care, nutritional programs.
- Promote suitable housing.
- Influence women's groups to actively participate in planning for the care for older women.
- Emphasize preventive measures against health hazards at work.
- Reenforce positive health behaviors such as physical activity that currently exist in the society.
- Develop social safety nets.

Education and Training

- Educate physicians in geriatrics and gerontology.
- Set Standards and train nurses for home health care.
- Educate the public to want home health care.
- Train health workers in basic rehabilitation skills aimed at mobilizing elderly.
- Integrate retirees into productive community activities through training programs.
- Incorporate volunteer activities into schooling and make it a part of adult life.

Organization and Finance

- Decentralize management and the provision of health services.
- Coordinate public and private insurance so that benefit packages and reimbursement approaches are comprehensive and standardized for the vulnerable age groups.
- Explore the introduction of compulsory "dependence" insurance levied on industry and employed, including self-employed.

Research and Evaluation

- Formulate a monitoring system to identify and document the social and health status of women.
- Undertake research to identify needs specific to a variety of age groups, and delineate the relationships between the changing role of women as women age and potential physical and mental health problems.

Improve Health Programs for Older Women

- Implement community based screening for major diseases, e.g cancers of the cervix and breast, hypertension.
- Promote experimention with alternative community care models such as day care and short hospital stays tailored to the elderly.
- Conduct vision screening at work place and in community.
- Improve efficiency of chronic care service management with options for day care and day hospital.
- Educate women to improve self-help skills to manage chronic diseases such as diabetes and hypertension.
- Provide systematic education programs for women on changing needs of aging, in nutrition, environmental health, smoking and alcohol abuse, oral hygiene.
- Educate women to increase their awareness of the impact of working conditions on their health.
- Encourage middle-aged women to participate in sports.
- Educate women on stress management, side effects of drug misuse, and possible addiction to tranquilizers, sedatives, and antidepressants.
- Introduce palliative measures and hospice care for the management of terminally ill patients.
- Establish geriatrics functional assessment in health care facilities.

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WOMEN'S HEALTH BEYOND REPRODUCTIVE AGE: THE PICTURE IN DEVELOPING COUNTRIES

1. INTRODUCTION

The purpose of this report is to describe health problems of women who are beyond reproductive age, that is, over 50 years of age or older, in developing countries and to discuss the implications for intervention and the best practices to promote their health.

Health problems of older women have received little attention from health planners in developing countries. Maternity care is a focus of attention because of the size of the problem: approximately 500,000 women die each year as a result of pregnancy, more than 99% of them in developing countries. But health problems of women are not homogeneous and cannot be addressed through maternal and child health services alone.

There will be a growing need in coming years to pay more attention to the important health issues of middle aged and older women because of the substantial increase in their numbers as a result of demographic shifts. Currently, two out of three of the world's 469 million women older than 50 reside in developing countries. By 2020 three out of four will reside in developing countries, an absolute increase of 408 million. Women's life expectancies, as in the developed countries, are longer than those of men. Elderly women will outnumber elderly men, and the health problems of an aging population will be largely the problems of women.

This report confines the discussion of women's health to the presence or absence of illness in the medical sense, even though this is a narrow description of women's well-being. A woman's well-being is understood to be the result of all her previous experiences, including factors such as urban or rural residence, marital status, number of children, education, income, and nutrition. Furthermore, work has a tremendous influence on women's physical and mental health. Indeed, occupational health problems are emerging as a result of the increased number of women in urban industrial jobs. These problems are discussed in separate reports.

The major causes of mortality for women older than 50 in developing countries are infectious diseases, cardiovascular and cerebrovascular diseases, cancer, and injuries. The ranking of these causes, however, varies by region and by the level of development, and differs from the ranking of male disease patterns. In lower-income countries, causes of death are primarily a mix of infectious diseases and chronic diseases. In middle-

income countries, the pattern is similar to that of developed countries: the major causes of death are cancer, cardiovascular and cerebrovascular diseases, and injury.

The major causes of morbidity are loss of visual acuity and hearing, osteoporosis, malnutrition, and anemia. In some developing countries, diabetes is becoming a leading cause of morbidity among the older population. Furthermore, mental illness is being recognized as a problem of increasing importance. The main diseases in adult and elderly women in developing countries estimated in the World Development Report 1993 are cardiovascular (including cerebrovascular) diseases, accounting for 38.9 million disability-adjusted life-years lost (DALYs); cancer, 14.4 million; infectious and parasitic diseases, 10.2 million; neuro-psychiatric diseases, 7.4 million; digestive disorders, 5.1 million; and injuries, 4.7 million. (see annexes A-1 and A-2).

Older women constitute a distinct population that requires interventions very different from those for younger women. Although medical care for managing diseases is the intervention most often used and the existing health services are geared toward acute rather than chronic care, preventive measures would be more appropriate and cost effective for the problems of older women. Prevention through early detection and treatment is available but still not widely accessible for the population that most needs the service. For example, health education for diabetic patients can help those affected to improve their own capacity for self-care and hence reduce the likelihood of medical complications.

Some of the key preventive measures require changing behavior. These would need to be introduced early in life to have an impact in later years. For example, the prevalence of smoking has increased substantially in developing countries, particularly among women. To avoid a tidal wave of chronic diseases, including lung cancer, education about the dangers of smoking and alternative means of reducing stress need to be started at very young ages.

Furthermore, housing policies need to recognize that demographic patterns by 2010 will differ from what they are in the 1990s. Housing policies need to be adjusted to address housing shortages in cities, improve architectural designs to reduce accidents and falls within homes, and encourage multigenerational family living arrangements. In both low-income and middle-income countries such as Kenya, India, Brazil, and the Philippines an urgent priority is improved housing. In these countries, ensuring a secure roof is as important for the health and survival of the elderly as having potable water.

The organization of this report is as follows. Section 2 describes demographic trends and the rural and urban distributions of the elderly female population. Section 3 describes the health status of mid-life and older

women. Section 4 reviews options for intervention and makes recommendations to improve their health. Section 5 concludes.

2. DEMOGRAPHIC TRENDS

Although some developing countries are considered to have young populations by most standards, the trend worldwide is toward a "greying population" with an increasing proportion of persons older than age 50. For example, in Asia 15% of women were 50 or older in 1990 and 24% will be by 2020, an increase of 316 million. In Latin America and the Caribbean (LAC), 14% were older than 50 in 1990 and 24% will be by 2020, an increase of 53 million. In Africa the figures are 10% in 1990 and 12% by 2020, an increase of 49 million, and in eastern Europe and the former USSR, 32% in 1990 and 40% by 2020, an increase of 49 million. Developing countries will experience a large increase in the absolute number of women by 2000 with an even faster increase projected later. Three-fourths of the world's women over 50 (684 million) will be in developing countries by 2020. Between 1990 and 2000 the more developed countries will add 26 million persons aged 50 and over to their population, while the less developed countries will add 77 million. Between 2000 and 2020, the increase will be 66 million and 332 million respectively (table 1). India and China will have the largest numbers of elderly persons by 2000, joined by other developing countries such as Brazil, Mexico, Bangladesh, and Nigeria.

These figures indicate that national policymakers in many developing countries must begin to develop programs designed to support greatly increased numbers of the elderly, both women and men, in coming decades. For example, Brazil had to provide for approximately 6 million older person over 60 in 1975; it will have to respond to the needs of more than 31 million elderly persons by 2025. Even if traditional family structures persist and young persons still feel obligated to look after their parents, they may require physical and financial support from the public sector as greater numbers of persons survive longer.

TABLE 1: NUMBER AND PROPORTION OF FEMALE POPULATION OVER AGE 50, LESS DEVELOPED AND MORE DEVELOPED COUNTRIES, 1990-2020 (millions) [a/]

	1990		2000		2020	
Type of Country	50-60	60+	50-60	60+	50-60	60+
World	197.6 (7.6)	269.2 (10.3)	238.9 (7.8)	330.5 (10.8)	411.6 (10.4)	555.8 (14.1)
Less Developed	130.7 (6.6)	144.4 (7.3)	163.0 (6.8)	188.7 (7.8)	322.9 (10.0)	360.6 (11.1)
More Developed	67.2 (10.8)	124.8 (20.0)	75.9 (11.6)	141.8 (21.6)	88.7 (12.6)	195.2 (27.2)

Source: World Bank data (1993).
[a/] Numbers in parentheses are women over age 50 as percentage of all women.

In almost all areas of the world, life expectancy of women is higher than that of men, and this disparity is projected to continue.[1] Life expectancy in high-income countries is 74 years for men and 80 years for women. In middle-income countries the corresponding numbers are 64 and 69 years and in low-income economies, 54 and 56 (World Bank 1992a).

Globally, the lowest life expectancies for women are in Africa and Asia. In Africa, life expectancies for women are 43-49 years in Mozambique, Tanzania, Chad, Malawi, Burundi, Uganda, Niger, Sierra Leone, Burkina Faso, and Guinea. In Asia, women's life expectancies are between 49 and 59 years in Bhutan, Bangladesh, Laos, India, Pakistan, and Nepal, while in Latin America and the Caribbean, only Haiti still has a life expectancy less than 60 years.

Although the increasing size of the elderly in populations is often associated with improvement in life expectancy, demographic analysis has shown that declining fertility and decreases in mortality and increases in migration also play a role. High levels of fertility in conjunction with high mortality are associated with a slow rate of population growth and a population structure weighted toward younger age groups. Only when fertility

[1] The exceptions are Bangladesh, Bhutan, India, Pakistan, and Nepal.

levels begin to fall in conjunction with low mortality rates does a population age--population growth slows and the relative size of the adult population, especially the elderly age group, increases. The aging population may be considered an ultimate, though often unanticipated, consequence of birth control campaigns. Migration also contributes to the aging of populations, either through the mobility of the young or through the immobility of the elderly. Internal migration of the young from rural to urban areas results in creation of rural "local pockets" of older persons. Such migration in the Middle East, the Caribbean, and central and eastern Europe affects the age and sex structures of small countries but has a limited impact on large countries. For example, migration in the Caribbean has contributed to an unbalanced male-female ratio (36% of households are headed by women in Barbados, 35% in Antigua) and has affected the ratio of the middle-aged population to the elderly, for example in Barbados and Jamaica there are fewer people in younger age groups to look after the elderly.

Location of residence is also a determinant of health and health care. In most developing regions of the world, older populations tend to live in rural areas and are projected to continue to do so, with women outnumbering men in these areas. United Nations data indicate that 70% of women age 60 or older lived in rural areas in 1980. By far the largest number of rural women today are in Africa, Asia, and the Pacific--these regions account for 85% of the world's rural women.

Latin America is an exception, because it is the most highly urbanized of all the developing regions of the world. Here, at least 60% of the population 60 and older live in urban areas and will continue to do so in 2000. Furthermore, women outnumber men in urban areas. The increase in urbanization brings special problems for women. They are much more likely to be widowed in old age than are men, owing both to their longer life expectancy and to the tendency for men to marry women much younger than themselves. Loss of a partner and living alone may have important health implications including an inappropriate diet, inattention to illness, and possible need for institutionalization.

In developing countries the family is the most important source of support for health care and for the economic and social well-being of the aged. However, rapid urbanization and increasing numbers of young people entering the workforce are weakening this support system. Worldwide, the greatest proportion of elderly persons without support are older widows. An national report for Jamaica stresses that elderly widows living alone are further handicapped by isolation, low morale, and low income (United Nations 1985). Cross-national comparisons of data show a very large proportion of widows, often exceeding two-thirds of women age 60 and older, as compared to low proportions of widowers (table 2). For example, in Malaysia a World Health

Organization survey showed that 56% of the women but only 11% of the men were widowed. Statistics on widowhood for Egypt, India, Indonesia, Jordan, and Syria are similarly high (Heisel 1988).

TABLE 2: WIDOWS AND WIDOWERS OLDER THAN AGE 60, SELECTED COUNTRIES, 1989

COUNTRY		MEN	WOMEN
Africa			
	Botswana	8.5	53.7
	Kenya	7.5	51
	Morocco	8.3	68.2
	Uganda	9.4	48.6
Asia			
	Indonesia	15.4	68.7
	Japan	16.6	56.6
	Korea	19.2	70.2
Central & South America			
	Brazil	14.4	50.2
	Chile	16.2	45.5
	Costa Rica	12.2	33.9
	Cuba	10.6	36.9
	Dominique Republic	7.7	31.6
	Mexico	10.8	36.6
	Peru	18.3	44.1
North America			
	Canada	12.7	41.6
	United States	1.2	44.5
Europe			
	France	14.5	45.5
	Germany	14.5	48.7
	Netherlands	15	36.8
	Sweden	14.2	34.2
	United Kingdom	14.3	41.9

Source: Tout (1989), p. 143.

Urban housing is ill-suited for the traditional extended family. Women traditionally have been the family care givers, but because they are increasingly joining the labor force, they are less available to care for older family members. Furthermore, as increased numbers of offspring and their spouses are both employed, attitudes toward providing the care and housing needed by their parents may change. For example, in Korea between 1960 and 1970 three-generation households dropped from 28% to 22% of all households. In light of declining family support available to older women in many urban settings, it is essential that governments develop policies such as allowances or tax concessions to encourage intergenerational living arrangements and

reinforce individual families that are caring for aged parents. In addition to addressing the problem of housing, decisionmakers will need to devise a social safety net which includes access to food, water, and communications to assist the growing number of destitute older people (United Nations Economic and Social Council 1986).

3. HEALTH STATUS

There is little empirical information on women's health other than maternal health. Furthermore, health data, when available in developing countries, are rarely disaggregated by sex and age. Only 78 countries currently report cause of death statistics to WHO, and even these data are not necessarily available for each calendar year. These statistics cover only 35% of all deaths (about 50 million) that occur annually in the world (Ruzicka and Lopez 1990). Moreover, there is a lack of data on disabilities and functional limitations.

In many developed nations where data are more available, older women have been found to manifest rates significantly higher than men for certain chronic diseases such as arthritis, osteoporosis, diabetes, and hypertension. The pattern is similar in developing countries. A study on adult disease patterns in Bangladesh, Jamaica, Malaysia, and the United States, finds that women report more problems than do men. This gender differential cuts across both economic and cultural dimensions. Furthermore, education has an effect on health-related behaviors, but its effect seems to dissipate as people age (Strauss et al. 1992). A WHO survey in 1986 in Fiji, Malaysia, Philippines, and Korea reported that two-thirds of the elderly responding had chronic health problems that impinged on their daily activities. The most common conditions were hypertension, pulmonary tuberculosis, peptic ulcer, heart disease, asthma, and abdominal pain. A survey of 1,004 elderly Nigerians showed that weakness, poor vision, and arthritis were the most frequent causes of impairment. Women with primary education were most likely to complain of weakness (table 3).

TABLE 3: PERCENTAGE OF NIGERIANS REPORTING HEALTH PROBLEMS, BY TYPE, SEX, AND AGE, 1984-85

	Urban		Rural		Under 65		65-74		75-84		Over 85	
Complaint	M	F	M	F	M	F	M	F	M	F	M	F
Weakness	29	40	54	69	24	38	39	51	58	68	62	72
Poor Vision	25	20	39	44	30	16	24	28	40	44	54	55
Trouble Bending	14	16	42	46	18	19	20	23	44	36	51	70
Weak Legs	8	14	39	47	10	24	18	20	39	34	51	65
Arthritis	11	23	34	46	14	28	20	27	27	41	43	60
Other Aches	10	14	25	28	13	28	14	12	23	29	33	28
Poor Digestion, Teeth	6	5	21	24	12	12	11	11	15	15	22	30
Deafness	4	6	16	14	6	5	8	9	12	15	16	22
Other	10	6	21	12	19	7	13	9	13	8	16	8
N	353	180	315	156	185	86	293	151	127	59	63	40
No Problem	24	21	13	11	19	21	19	14	9	8	5	8

Source: Ekpenyong and Peil (1987)

Causes of death for adult and older women as for men vary with a country's level of development. It is imperative to keep in mind the heterogeneity of developing countries. In Asia and Africa where infant mortality rates exceed 200 per 1,000 live births, causes of death for women are dominated by communicable diseases, while in countries such as Argentina, Chile, China, Cuba, and Uruguay, where life expectancy is comparable to that in many developed countries, chronic diseases are of major concern. In other developing countries where life expectancy is 55 to 65 years, the causes of death are both communicable and chronic diseases.

Morbidity and mortality records for women older than 50 in most regions of the developing world show a predominance of chronic diseases: cardiovascular diseases, cancers, diabetes, osteoarthritis, and mental disorders. In Africa and South Asia, however, infections of the intestinal and respiratory systems still persist as major causes of illness and death. In most regions of the world, cancers rank first or second as causes of death for women older than 50, followed by heart disease, cerebrovascular, diabetes, and injuries. The profile is different when data can be disaggregated by urban and rural residence, suggesting the influence of life style on patterns of disease. In more rural countries, major causes of death are still lack of basic environmental and preventive services. Table 4 presents aggregate data on causes of death in developing countries.

TABLE 4: CAUSES OF DEATH (IN THOUSANDS) IN DEVELOPING COUNTRIES, BY AGE, 1985

Cause	Under Age 5	Over Age 5	All Ages
Infectious			
Diarrhea	10500	6500	17000
Tuberculosis	4000	1000	5000
Acute respiratory diseases	300	2700	3000
Measles/pertussis	6300	4300	2000
Malaria	1500	n.a.	1500
Schistosomiasis	750	250	1000
	n.a.	200	200
Maternal			
Perinatal	n.a.	500	500
Neoplasm	3200	n.a.	3200
Chronic Obstructive Lung Disease	n.a.	2500	2500
Circulatory	n.a.	2300	2300
External	n.a.	6500	6500
Other	200	2200	2400
	700	2800	3500
Total	14600	23300	37900

Source: Lopes (1990).
n.a.: Not available.

CANCER

Cancers of the cervix, breast, and stomach are the most frequent neoplasms found in women in developing countries; in developed countries the most common are cancers of the breast, colo-rectal, and stomach (see tables 5 and 6). The difference is most striking in developed countries with regard to cervical cancer, because of the availability and accessibility of vaginal cytology screening (Pap smear). Here it has been demonstrated that early detection through Pap smears and treatment has made a difference. A variation in prevalence is also seen regionally which corresponds to a country's level of development. For example in Latin America and the Carribean, cancer of the cervix predominates in the less developed and more rural countries, whereas breast cancer is more common in the more developed countries. Table 7 illustrates the pattern of cancers in this area.

TABLE 5: MOST FREQUENT CANCERS IN WOMEN, BY REGION, WITH ESTIMATED ANNUAL NUMBERS OF CASES IN THOUSANDS, LATE 1970

Region	Most common	Second most common	Third most common
North America	Breast(105)	Colorectal(56)	Lung(25)
Latin America	Breast(49)	Cervix(44)	Stomach(17)
Europe	Breast(162)	Colorectal(87)	Stomach(61)
Former USSR	Stomach(49)	Cervix(31)	Breast(31)
Africa	Cervix(37)	Breast(27)	Lymphatic(12)
Australia/New Zealand	Breast(6)	Colorectal(4)	Cervix(1)
Japan	Stomach(29)	Breast(12)	Cervix(10)
China	Cervix (132)	Stomach(68)	Esophagus(59)
India/other Asia	Cervix(142)	Breast(95)	Mouth(48)

Source: World Health Organization (1992a).

TABLE 6: ESTIMATED NUMBER OF NEW CASES OF CANCER IN WOMEN WORLDWIDE 1980

Type	Number	Percentage of all female cancers
Breast	572,100	18.4
Cervix	465,600	15.0
Colorectum	285,900	9.2
Stomach	260,600	8.4
Uterus	148,800	4.8
Lung	146,900	4.7
Ovary	137,600	4.4
Mouth Pharynx	121,200	3.9
Esophagus	108,200	3.5
Lymphoma	98,000	3.2

Source: Boyle, Maisonneuve, and Hsieh (1988).

TABLE 7: DEATH RATE PER 100,000 WOMEN FOR BREAST AND CERVICAL CANCER IN LATIN AMERICA AND THE CARRIBEAN, 1980s

Country Type	Breast	Cervical
Highly urban	4.3	1.7
Mixed	2	2.3
Highly rural	0.9	1.6

Source: Pan American Health Organization (1991).

Cancer of the cervix accounts for 500,000 new cancer cases each year worldwide. About 80% of these occur in the developing countries, accounting for 200,000 deaths annually. Areas of highest incidence include Colombia (50 per 100,000) and Brazil (40 per 100,000). Poorer countries and poorer groups of women within countries have the highest risk. The primary cause of cervical cancer is genital infection with human papillomavirus. Because cervical cancer generally develops slowly and has a readily detectable and treatable precursor condition (severe dysplasia or carcinoma *in situ*), it can be prevented through screening and treating at-risk women. If detected early, cancer of the cervix can be cured. Periodic Pap smear screening is an effective secondary prevention measure. Where such programs are available, as in many Western countries, mortality from cervical cancer has fallen by 50 to 60 percent. However, there are many problems in the implementation of a screening program: high cost, shortage of technical skills, and lack of identification of high-risk population groups. Access to screening is greater in urban than in rural areas, where the prevalence of the disease is greater among the poor population.

Developing countries have been less successful than more developed countries in implementing cervical cancer screening programs. Major barriers to implementation of such programs are: the lack of infrastructure to support cytology-based screening; the lack of treatment services for cancerous and precancerous conditions; and the expense of implementing a routine program. There are however alternative approaches to routine cervical cancer screening programs. For example, studies show that screening once every three years can result in a 91% reduction in mortality from cervical cancer. Even screening a woman every ten years resulted in a 64% reduction (Miller 1992). Thus feasible and cost-effective screeening programs could be designed that target women older than 40, screen relatively infrequently (for instance every ten years), treat only severe dysplasia or carcinoma *in situ,*[2] and use relatively inexpensive outpatient treatments such as cryotherapy and

[2] Studies have shown that screening all at-risk women once in their lifetime prevents many more cases of cervical cancer than does screening a small proportion of women every few years. Moreover, the majority of mild to moderate dysplasia resolve spontaneously within two years, whereas from 10 to 30% of severe dysplasia or carcinoma *in situ* progress to invansive cancer within ten years.

loop electrode excision procedures to eradicate cervical lesions. In settings where limited cytology screening programs are not feasible, screening based on visual inspection of the cervix has been investigated. For example, in India preliminary data indicate that unaided visual inspection of the cervix may detect two-thirds of early cancers in women attending clinics for gynecologic complaints. However, a significant proportion of the cancers detected through this approach require relatively aggressive medical therapy and some are untreatable. Another approach being investigated is the use of a simple magnifying lens to view cervices treated with an acetic acid solution to highlight abnormal tissue. It has been suggested that this approach coupled with backup cytology may provide an easier, less costly way to identify high grade dysplasia/carcinoma *in situ* and to make treatment decisions. Such innovative approaches need pilot studies to assess their feasibility and cost-effectiveness vis-a-vis Pap smear screening programs in regions where the incidence of cervical cancer is high (Sherris et al. 1993).

Treatment of cervical cancer varies according to the stage of the disease. For noninvasive lesions, destruction of the affected tissue by incision or laser and periodic followup may achieve a cure. As an alternative, hysterectomy removes the affected tissues and obviates any need for further surveillance. In more advanced stages the treatment options depend on the extent of tumor spread. Extensive pelvic surgery and radiation can cure cancer that has spread beyond the cervix, although success is less likely .

Breast cancer accounts for 572,100 cases of breast cancer each year in the world, of which 40% occur in developing countries. Breast cancer represents a smaller proportion of total cancer in women in Africa, Asia, and eastern Europe than in North and South America and western Europe, with the lowest percentages from the former USSR and Japan (table 8). Out of the 572,100 new cases each year worldwide, it accounts for between 1% and 3% of all deaths in developing countries and 3% to 5% in developed countries. The incidence is highest in North America followed by western Europe, eastern Europe, and Japan. The incidence is also higher in urban areas than in rural areas, irrespective of whether the region is high or low risk. The excess in incidence between urban and rural areas was about 50% with a range from 19% to 89% in 1988. Mortality and incidence rates increase progressively with age until menopause, after which the rate of increase is less.

TABLE 8: BREAST CANCER AS PERCENTAGE OF ALL CASES OF CANCER IN WOMEN SELECTED COUNTRIES, 1988

Country	Percent
Canada	29.1
United States	
- White	27.9
- Black	25.6
Nordic Countries	23.5
Latin Countries	26.8
United Kingdom	
- England & Wales	26.8
- Scotland	24.1
Poland	17.3
Former USSR	11.8
Australia	25.8
Asia	17
Japan	10.3
India	17.4
Hong Kong	14.6
China	n.a.
Africa	13.4

Source: Boyle, Maisonneuve. and Hsieh (1988).
n.a.: Not available.

Breast cancer rates have increased significantly in developing countries in recent years. Between 1964 and 1975 rates increased by 50% in Hungary and Poland, while rates in western Europe and North America stabilized. Breast cancer rates exceed those of cervical cancer in Argentina, Cuba, and Uruguay.

Breast cancer is a hormonally influenced disease. Risks are associated with age at first pregnancy, age at menarche, and age at menopause. These factors are not susceptible to direct modification and thus offer little possibility that public health strategies can reduce in incidence or mortality. However, recent descriptive epidemiological data suggest that, while there may be a genetic component to breast cancer risk, there is also strong evidence that environmental factors play an important role. Migrants tend to acquire the breast cancer pattern of their new home, for example the Japanese in the United States. This indicates that there may be ecological factors operating that determine breast cancer risks. If so, the implication is that breast cancer may be preventable even though it is still unclear what the intervention strategy should be (Boyle, Maisonneuve, and Hsieh, 1988).

Breast cancer can be detected early. Early detection is most effective in reducing mortality because treatment is less successful than it is, for example, for cervical cancer. Screening programs include physical examination of the breast by trained health workers; breast self-examination; and mammography. These

measures can reduce breast cancer mortality by 30%[3]. Physical examination alone can detect about two-thirds of the cancers detected by mammography. However, mammography is still considered too expensive for most developing countries. A study in the Philippines in 1992 to determine whether annual screening using physical breast examination by trained midwives and nurses reduced mortality found that at least five or more years of follow-up were needed to detect a reduction in mortality (Ngelangel et al. 1992).

The standard initial treatment for breast cancer is surgical resection of the tumor and radiation given to the breast and adjacent lymph nodes. Adjuvant therapy with Tamoxifen improves survival of treated cases. In both industrialized and less developed countries, Tamoxifen offers a safe, inexpensive, and effective treatment. There is strong evidence that radiation and Tamoxifen therapies lessen recurrence following surgery. However, the potential gains are relatively small when considered for the population as a whole. Metastic disease is treated with radiation and/or chemotherapy and hormonal therapy to reduce local symptoms and to induce remission. After the initial treatment the patients often follow a path of remission and relapse. In the United States approximately 70% of breast cancer patients survive five years. But, an important feature of breast cancer, unlike most other tumors, is that recurrence is common after a prolonged survival free of disease.

Lung cancer still occurs predominantly in men, and the mortality rate is relatively low in developing countries. But, because smoking is a major risk factor, it is certain that the lung cancer incidence and mortality rate will increase in developing countries. Furthermore, the rate for women will increase as the prevalence of women smokers increases in developing countries (see box 1). If this trend continues, a higher incidence of lung cancer among women can be expected by end of this century. For example, in China, if current patterns continue, it is projected that 50 million people (who are children today) will die of lung cancer by 2020. In eastern Europe, lung cancer rates for women have risen over the past ten years (see box 2).

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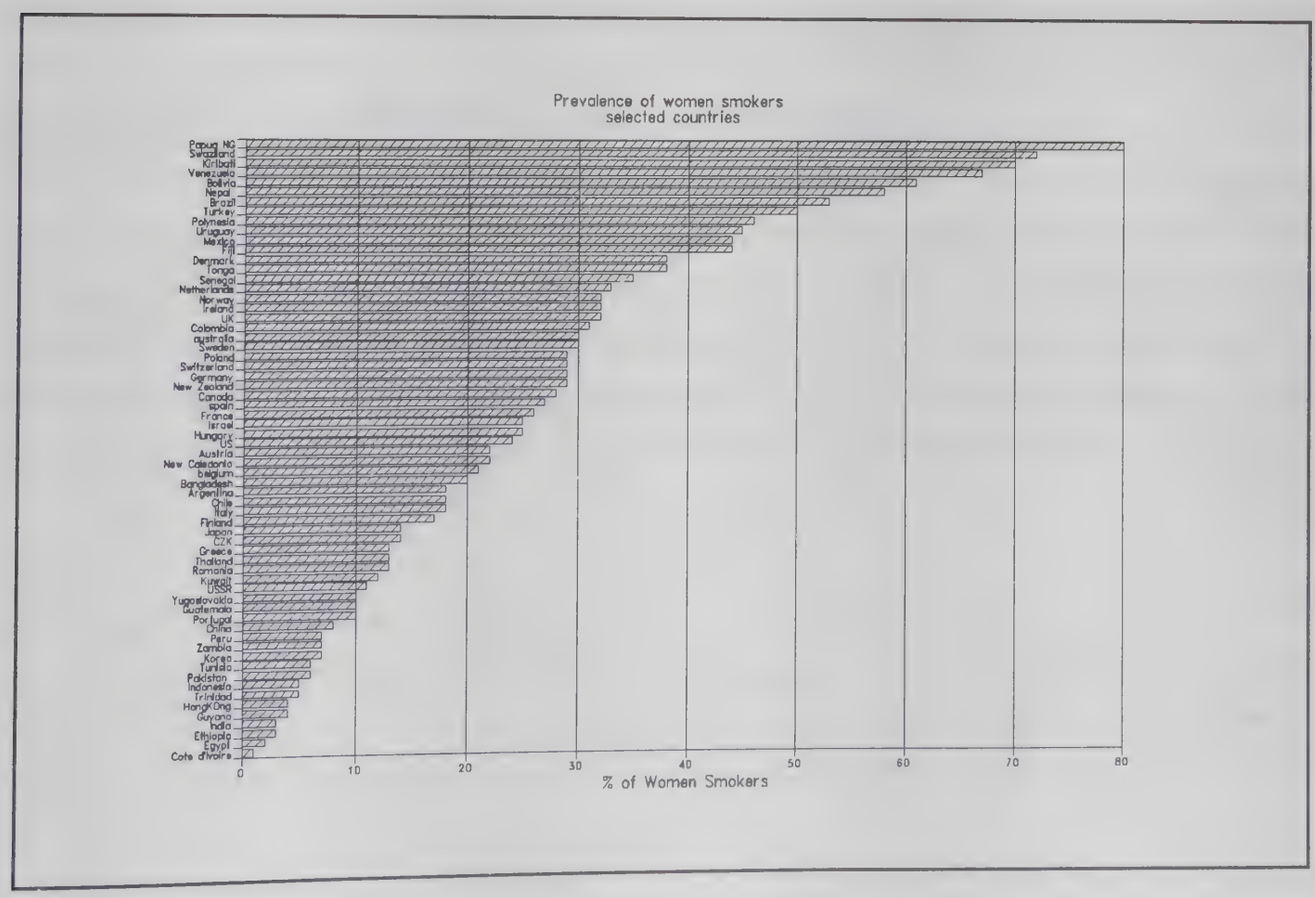
[3] The effects of screening differ by age. Earlier detection does not necessarily mean fewer deaths or a longer life expectancy. For women age 40 to 49 there is no reduction in mortality from breast cancer mammography screening. For women 50 to 69, mammograms and physical examination can reduce deaths by about one-third. But the necessity of annual mammograms is still being question. Swedish studies found that screening as infrequently as every thirty months still reduced breast cancer deaths by 40% in women over the age of 50.

BOX 1. WOMEN AND TOBACCO

While women still smoke less than men do, the growth rates of cigarette consumption in developing countries are greater than those of the developed countries. About 5% to 7% of women in developing countries are smokers. However, there are disturbing exceptions. In Papua New Guinea 80% and in Swaziland 72% of adult women smoke or use some form of tobacco. The rates range from 50% to 60% in Turkey, Bolivia, Nepal, and Brazil. A study in Cuba showed that relative risk of lung cancer was 14.1 per 100,000 for men and 7.3 for women with a prevalence rate of 80% of male and 30% of female smokers. The attributable risk of smoking was 86% for male lung cancer cases and 91% for female lung cancer cases.

Women who smoke like men will die like men. Between 1960 and 1980 the average annual number of deaths from lung cancer among women in twenty-nine industrialized countries surveyed by WHO increased by 200% (Doty 1987). A study in the United States showed that 30% of female mortality can be attributed to smoking. The trends in lung cancer rates among women have also increased in developing countries. The relation between smoking and lung cancer has been established and is greater than other contributing factors such as coal or biofuel smoke pollution, to which more women than men are exposed in developing countries. In southeast Asia, more than 85% of oral cancer cases in women are caused by chewing and smoking tobacco. In addition, smoking has deleterious effects on reproductive health and contributes to increasing risk of cardiovascular diseases and of earlier menopause. Smokers are also more prone to osteoporosis among postmenopause women (Smyke 1991).

What can be done to reverse the epidemic of tobacco use among women? The successful control of tobacco use will depend on social and political will, involving the collaboration of many sectors. Legislative, fiscal and agricultural policies must complement health education programs aimed at eliminating tobacco consumption. Health education programs need to be tailored to different age groups and introduced early in schools and in the workplace. A mass communications strategy needs to be developed, to counter cigarette advertising campaings deliberately targeted at women, particularly young women. Health education programs need to be tailored to different age groups and introduced early in schools and in the workplace. Antitobacco programs also need to teach smokers stress reduction since smoking is often used as a coping strategy.



Source: Doty 1987

BOX 2. HEALTH OF OLDER WOMEN IN EASTERN EUROPE

For both men and women, total mortality rates are about 40% higher in the former centrally planned economies than in the industrialized market economies.[4] The difference is the result of a high proportion of deaths due to circulatory diseases. These account for 66% of all female deaths. Cancer is the second major cause, accounting for 14% of all female deaths. Injury accounts for about 4%. Together, these three account for 85% of all deaths. Behavioral factors, including cigarette smoking and diet, are the key risk factors and are worsened by occupational hazards for certain cancers and respiratory diseases. Eastern Europe has particularly high rates of tobacco consumption. Lung cancer mortality in Poland increased 5% between 1963 and 1985. The standardized mortality rate for women increased from 3.9 per 100,000 to 8.2 per 100,000, from 3.9% to 7.6% of all cancer-related deaths. This increase is associated with the rising tobacco consumption among women. A practice contributing to increased consumption was the issuance of coupons for cigarettes in lieu of pay to workers in the 1970s. A similar practice was reported in Hungary.

Cancer incidence and mortality in former Czechoslovakia, Poland, and Hungary is similar to that in developed countries: breast cancer is on the rise but cervical cancer is on the decline. There are however intraregional variations. For example, in the former Czechoslovakia, age-adjusted incidence rates of breast cancer increased from 28 to nearly 39 per 100,000 between 1960 and 1984, an increase of more than 33%. In Hungary breast cancer increased by 87% over a thirty year period (1955-1986). In Poland breast cancer is also the leading cause of death, followed by stomach and lung cancer. The highest incidence of cancer of the cervix in Europe is from the former GDR (24.6 per 100,000) and Krakow, Poland (20.2 per 100,000); the lowest is in Szabolcs, Hungary (9.5 per 100,000).

AGE-STANDARDIZED DEATH RATES (PER 100,000) BY SEX SELECTED CAUSES, INDUSTRIAL MARKET AND NONMARKET ECONOMIES, 1985

	All industrialized countries		All industrialized market economies		All industrialized nonmarket economies	
Cause of death	**M**	**F**	**M**	**F**	**M**	**F**
Infectious and parasitic disease	57.5	33.9	48.3	28.5	62.0	36.1
Neoplasms	268.7	149.2	264.6	154.4	266.3	136.1
Disease of the circulatory system and other	605.6	405.3	516.7	323.3	847.5	582.2
Complications of pregnancy	0					
Perinatal conditions	10.5	7.5	7.5	5.8	14.3	9.7
Injury and poisoning	99.2	35.7	79.5	31.8	137.0	41.9
Ill-defined causes	26.5	17.3	26.8	18.7	26.2	14.2
Other causes	136.6	73.6	127.5	72.7	153.4	71.9
All causes	1206.5	724.3	1070.9	635.3	1513.6	897.2

Source: Lopez (1990).

[4] The centrally planned economies included Albania, Bulgaria, Hungary, Poland, Romania, the former USSR, Czeckoslovakia, German Democratic Republic, and Yugoslavia.

CARDIOVASCULAR AND CEREBROVASCULAR DISEASES

Cardiovascular diseases are now the leading cause of death in developing countries among males and females. This includes ischemic heart disease, cerebrovascular disease (stroke), and hypertensive heart disease. In China they account for 50% of all deaths (see box 3), and at least 1 million deaths from stroke alone with the age-adjusted mortality rate is slightly higher for women, 124 per 100,000, than for men, 112.3 per 100,000. Another 1 million deaths are attributed to all forms of heart disease (the age-adjusted mortality rate is same for men and women: 176.4 per 100,000). In India they account for 10% of deaths. In Latin America and the Caribbean, another 800,000 to 900,000 deaths (men and women) are from these causes. These rates suggest that between now and 2000 cardiovascular diseases morbidity and mortality rates will continue to increase sharply (Lopez 1990).
In Latin America and the Caribbean, cardiovascular and cerebrovascular diseases are the leading causes of death among women 65 years of age and older.

Hypertension is estimated to affect 20% of the population of the Caribbean and is a powerful risk factor for cardiovascular and cerebrovascular problems. In countries with higher urban concentrations of older women, such as Argentina, Chile, Colombia, Costa Rica, Cuba, Peru, and Uruguay, death rates from these causes are between 15% and 26% from 1968 to 1978, a pattern similar to that of Canada and the United States. Death rates from these two conditions increased in rural countries such as Mexico, Nicaragua, Honduras, Guatemala, Ecuador, and El Salvador. In part perhaps due to improved reporting from the rural countries. While a decrease in the more urban countries, such as Chile, Argentina, may be the result of modifications of risk-producing life-style factors for example, control of hypertension, weight reduction, smoking cessation. However, modification of behavior, such as smoking cessation, as a cause for decreased hypertension could not be supported by available data. A study by Pan American Health Organization indicated that adoption of healthier life styles is generally not happening in Latin America. Among women, use of cigarette and alcohol is on the increase (Sennott-Miller 1989).

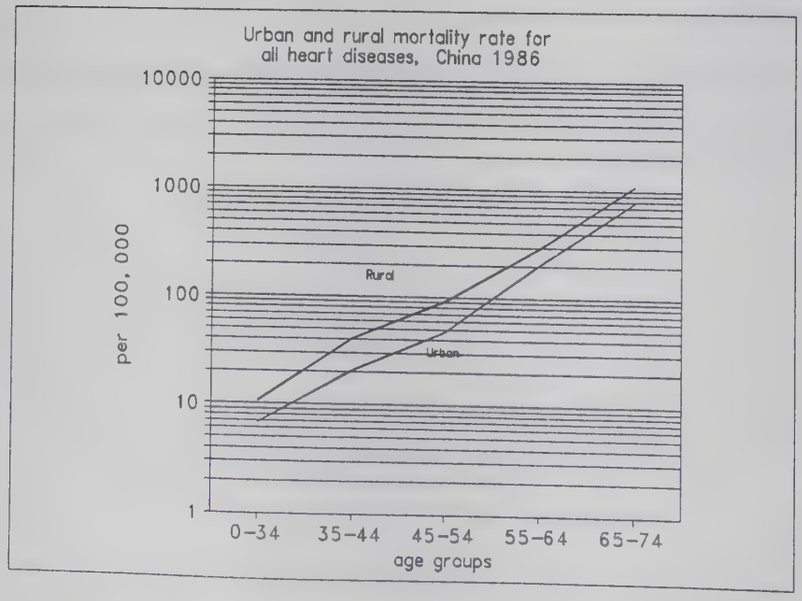
BOX 3. HEALTH OF WOMEN IN CHINA

China has achieved a remarkable reduction in both fertility and mortality rates. Life expectancy increased from 45 years in the mid-1950s to 58 years by the mid-1960s. By 1981 life expectancy for women was 72 years, two years higher than that for men.

China's achievement in reducing the birth and death rates and in improving women's health status is to a significant extent related to its health policy of providing access to basic care, including development of a network of maternal and child health services, training of community health workers to provide basic care, family planning services, availability of drugs, and medical personnel to attend to birth. In addition, an important factor is the government's full political support for improving women's literacy and instituting marriage laws. The Marriage Law of 1950 abolished arranged marriages, outlawed paying any price in money or goods for a wife, outlawed polygamy, outlawed child marriage, prohibited interference in the remarriage of widows, guaranteed the right of divorce of wives as well as husbands, and set the minimum legal age for marriage at age 18 for women and 20 for men. The new Marriage Law of 1980 set the age at marriage for women at 20 and for men at 22.

Women's health, in particular the health of the older women, is better than men's health. For most of the infectious diseases and chronic diseases men are affected more than women with the exception of rheumatic heart disease and cor-pulmonale. There are considerable regional and urban-rural differences. Women in rural areas have higher mortality rates of infectious diseases, including tuberculosis, and higher rates of stomach cancer mortality, and heart disease (particularly rheumatic heart diseases). Women in the urban areas have higher rates of cardiovascular and cerebrovascular diseases and diabetes. Cor-pulmonale is higher among rural women, which could be due to the long-term use of coal for indoor heating and cooking. Health also varies substantially among urban areas. For example, health in Tienjin ranks third when compared with other provinces in China. Life expectancy was 72 years for women; maternal mortality was 38.9 per 100,000. The leading causes of death are heart disease, cerebrovascular disease, malignancies, and injury. Disaggregated data, however, show that improvement is not homogenous. People living in poor housing conditions ('flat housing,' basically slums) with inadequate sanitation facilities have a higher rate of tuberculosis, infant mortality, female lung cancer mortality. Women who lived in flat housing exposed to long-term use of coal for heating and cooking had a higher incidence of lung cancer than other women in the city, controlling for cigarette smoking and education (Young and Bertaud 1990).

The mortality rate is expected to increase as the Chinese population ages. By 2020 there will be 227.6 million women age 50 or older, an increase of 134 million since 1990. Morbidities and disabilities from chronic disease will create an excessive burden for health services. Thus it is imperative that the government start now exploring alternative measures, most importantly prevention programs, to target the high-risk young and middle-age adult population groups in order to have an impact in reducing chronic disease among older people.



Source: World Bank 1992b

Diabetes data on incidence and prevalence are scarce and fragmentary.[5] Thus current evidence about the worldwide public health significance of diabetes is limited. With urbanization, noninsulin-dependent diabetes (NIDDM) is becoming more important, particularly in Asia, the Middle East, and Latin America and the Caribbean. A survey in China found a prevalence rate of 0.67%, with considerable regional variation, compared to the U.S. prevalence of 2.4%. Several community-based surveys also found that the prevalence of NIDDM for expatriate Chinese in Singapore (4%) and in Taiwan (7.6% in urban and 4.7% in rural areas) is higher than that for China. In Tunisia the prevalence was 3.5% in urban women and 0.6% in rural women. In Tanzania prevalence was between 0.2% and 1.1%. NIDDM is one of the five leading causes of death in thirteen of the eighteen Latin America countries and six of the ten Caribbean countries (Sennott-Miller 1989). Prevalence is between 8% and 10% of the adult population in the Caribbean. A household survey in Uruguay in 1982 showed a 7% prevalence rate for women age 60 and older.

Diabetes is a major cause of morbidity because its effect is felt long before death. It is a major risk factor for cardiovascular disease. It is associated with vascular changes in the retina that may lead to blindness, kidney damage that may lead to renal failure, and peripheral vascular diseases that may lead to damage of lower limbs, ulceration and infection, and gangrene requiring amputation. A study in Cost Rica lists it as the principal discharge diagnosis for women 60 and older, accounting for 15% to 20% of hospital bed occupancy (Sennott-Miller 1989).

The risk of NIDDM increases with age, and women are more predisposed than men. There are no known measures to prevent diabetes, except possibly avoidance of obesity and maintenance of regular exercise. In countries in Latin America and the Caribbean that are observing increasing morbidity and mortality from the disease, program emphasis could focus on education for detection and secondary prevention to avoid the complications of the disease.

UNDERNUTRITION AND ANEMIA

Chronic undernutrition is common among older women in Latin America and the Caribbean, South Asia, and Africa. In both rural and urban settings, years of childbearing and sacrificing her own nutrition for that of her family may cause chronic undernutrition and anemia in a woman. According to UN data, improvements in nutrition

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[5] There are two types of diabetes, insulin dependent and noninsulin dependent. Insulin-dependent diabetes generally occurs among those under 15 years of age, and its etiology is associated with both genetic and environmental factors. Noninsulin-dependent diatetes is most common in the older age groups. It is associated more clearly with factors such as obesity and lack of exercise. More than 85% to 90% of diabetes in developing countries are of this type.

have often lagged behind other measures to reduce mortality in less developed countries. Older women are most affected by food shortages during crises. During the famine of 1976 in Sri Lanka, deaths were 20% higher than normal among infants and 45% among those age 65 and older.

There is a high incidence of malnutrition among the elderly of Korea. Intake of protein, riboflavin, vitamin A, ascorbic acid, and calcium is deficient. The consumption of meat and dairy products is relatively low. These deficiencies are the result of ignorance, prejudice, unavailability, and cost. Most elderly Koreans have little knowledge of nutritional needs and have food preferences that may interfere with an adequate diet. Beef is the most favored meat but is expensive. Pork, chicken, and fish are often disliked (Koo and Cowgill 1986).

In sub-Saharan Africa, diets insufficient in calories and deficient in nutrients are a major contributor to poor health. The elderly in rural areas are one of the most vulnerable groups. In Benin a survey showed that more than 78% of the respondents obtain their staple foods from small family farms. Most of the elderly live in the rural areas, where their diet includes starchy foods (cassava and yam) mixed with vegetable oil, crayfish, and seasoning. The consumption of other nutritious food such as eggs, milk, poultry, and meat is low because of their high cost. For the elderly who live in the rural areas, water is not always available in substantial quantity and good quality. The elderly are particularly vulnerable to water-balance disturbances. Dehydration is a frequent occurrence in elderly women. Older persons lose some of their ability to concentrate their urine, so they may become dehydrated more easily when faced with inadequate water intake. And older people often are less perceptive of mild dehydration and fail to appreciate thirst as an early symptom. With severe dehydration, hallucination, delirium, manic behavior, seizures, and coma may develop.

Nutritional anemia often occurs when women with a history of marginal nutrition coupled with closely spaced pregnancies and continual lactation become iron deficient. This is more severe in rural areas. But iron deficiency is not the only cause of anemia. Diets that are deficient in folate or vitamin B12 also cause anemia. Moreover, folate-deficiency anemia may mask signs of iron deficiency. Folate deficiency is common in areas where cereal diets with very little animal protein, fruits, or vegetables are consumed. In southern Africa, where maize diets are common, folate deficiency is approximately 50 percent, with iron deficiency present in at least 17 percent of the population (Winikoff 1988). Malaria is another important cause of anemia, especially in tropical Africa.

Iron-deficiency anemia occurs throughout the world, but appears most common in South Asia and Africa (table 9), where about two-thirds of pregnant women and one-half of nonpregnant women are anemic. About 40% of this anemia is believed due to iron deficiency (DeMaeyer and Adiels-Tegman 1985). There is however considerable variation even within a region. A study in Latin America and the Caribbean ranked the proportion of

adult women who were anemic: the Caribbean had the highest percentage (37%), followed by Middle America (26%), tropical South America (14%), and temperate South America (12%) (Sennott-Miller 1989). Anemia has many deleterious effects on the health of a persons, including increased susceptibility to infections and reduced work productivity. Even mild and moderate anemia can cause fatigue and affect work capacity.

TABLE 9: PREVALENCE OF ANEMIA BY REGION FOR WOMEN AGE 15-49, 1980

REGION	PREGNANT ANEMIC		ALL ANEMIC	
	Millions	Percent	Millions	Percent
Africa	11.3	63	46.8	44
North America	n.a.	n.a.	5.1	8
Latin America	3	30	14.7	17
East Asia	0.5	20	8.4	18
South Asia	27.1	65	191	58
Europe	0.8	14	14.1	12
Oceania	0.1	25	1	19
World	43.9	51	288.4	35
Developed	2	14	32.7	11
Developing	41.9	59	255.7	47

Source: DeMaeyer and Adiels-Tegman 1985
n.a. Not available

OSTEOPOROSIS

Osteoporosis is a process of bone loss that may result in pain, disability, and increased risk for fractures. Bone loss rises sharply after menopause, thus osteoporosis is most common in older women (at least among Causasians), even though it may also occur in men. Why osteoporosis develops is not completely understood. It appears to be linked to decreasing hormone levels, lack of calcium in the diet, inadequate exposure to sunlight, and inactivity. Other possible risk factors for osteoporosis include short stature, being underweight, alcoholism, and cigarette smoking.

Osteoporosis is common among Caucasians and Asian women, rare among blacks. Its incidence and prevalence are virtually unknown in Latin America. Globally, it is estimated that 10% of the population older than age 60 is affected. It develops gradually over many years and leads to fractures of the hip, spine, and wrist. Comparisons of the incidence rates of hip fractures in different countries show higher rates in Caucasians than in black, Asian, and Hispanic populations. The rates are higher in Caucasian females than in Caucasian males, while in Asians, blacks, and Maoris the sex ratios are reversed (World Health Organization 1992a).

To prevent osteoporosis, it is important to have an adequate diet, including sufficient calcium throughout life, to exercise regularly, and to abstain from cigarette smoking and excessive use of alcohol. Estrogen therapy retards or prevents bone loss. However, if its use is prolonged, estrogen increases the risk of endometrial cancer. Estrogen therapy may need to be continued for many years for the best protection against bone loss. But it is not yet cost effective to start this treatment as a public health measure in low- income developing countries.

INJURY AND OCCUPATIONAL HEALTH

Injury, traffic, industrial, and farm related, is a leading cause of death for women at mid-life in most part of the developing world. Increasingly for women, whose work is concentrated in such industries as textiles, footwear, food production, electronics, and handicraft production (Sennott-Miller 1989). Unsafe conditions in these factories including hazards such as excessive noise or heat or exposure to radiation or toxic chemicals are the major health risk factors. Since 1980 the trend in industrial injuries has been rising. Occupational injury rates in 1980 were ten times higher in less developed countries than in developed ones. The health of women in industries is discussed in detail in a separate report.

VISUAL IMPAIRMENT

Among the elderly visual impairment is most prevalent in women. Even though the incidence of trachoma, which used to be a frequent cause of blindness, has decreased with access to medical care, the numbers of older people with visual impairment is still high. Another preventable cause of blindness is glaucoma. Within the aged population, for reasons that are not clear, women are more likely to be blind than men of same or similar age. For example, in the Syrian Arab Republic, 27% of women age 70 or older were blind as compared to 16% of men (Foner 1989).

Cataract still remains the most common cause of blindness in the world for both sexes. There is no predisposition by sex. WHO estimates that 17 million people are currently blinded by cataract, 5.4 million of them in China alone. The incidence of cataract blindness is 1.25 million annually and is projected to double by 2010. Prevalence varies from region to region and within regions. It is highest in Asia, at 1.5%. Blindness due to cataracts contribute to an estimated 2.4 million DALYs lost for women older than 45. It ranks sixth as cause of disease for women between 45 and 59 years of age, and tenth for women older than 60. Cataracts have many etiologies, but senile cataract is most common. Cataract extraction surgery is highly effective and costs between $15 and $33 per case. Vision loss is reversed with the removal of the opacified lens. It is estimated that the patient who benefits from sight-restoring cataract surgery may generate 1500% or more annual return on the cost of

surgery. Yet fewer than 10% of blinding cataracts are extracted annually in the developing countries. In contrast, blinding cataract is nearly unknown in the United States and Europe (Javitt 1991).

MENTAL HEALTH

Data on the prevalence of mental illnesses in developing countries are difficult to obtain. Reviews conclude that overall rates among men and women are similar, even though the nature of the disorders tends to vary by gender (table 10). These figures are comparable to the global disease burden estimates in the World Bank's World Development Report (1993). About 10 million DALYs are lost by men as result of neuropsychiatric disorders as compared to 8.6 million lost for women. Women have higher prevalence of depressive disorders and dementias including alzheimer's disease than men. Psychoses are estimated to create a slightly greater burden on men than women -- 0.13 million DALYs for men and 0.11 million DALYs for women (see annex table A-1).

Epidemiological studies in developed countries show a preponderance of women diagnosed with mental health problems, particularly neuroses and affective disorders. Gender differences are smaller for psychotic illness such as schizophrenia and organic conditions such as senile dementia. The gender difference is reversed in personality disorders such as psychopathy and drug and alcohol abuse. The question to be answered is: "why are women more prone than men to become psychiatric patients?" Two perspectives can be suggested. One, is that women experience stress and hardship to a greater extent than do men and are literally "driven mad" by oppressive social structures. Or another explanation offered is that women are more likely than men to be labeled neurotic by professionals because of the widely held stereotype of the female neurotic. Perhaps the answer is found in a blending of these two ideas and the recognition that women's life experiences make them more vulnerable to mental distress and in addition, they are more likely than men to be labeled psychiatrically ill worldwide (Miles 1991).

The Epidemiological Catchment Area (ECA) program showed that treatments for women and men are distinctly different. Most women are treated by general practitioners; men receive treatment from specialists (World Health Organization 1992a). What are the consequences for women of receiving one or another psychiatric label for their problems? General practitioners have little to offer patients other than a prescription for some psychotropic drug such as tranquilizers, sleeping pills, or antidepressants. An investigation on the use of tranquilizers in Lima, Peru, showed that women were given twice as many prescriptions as men (Smyke 1991), even though long term use of tranquillizers and antidepressants is addictive. The process of giving women a psychiatric label and treating them with drugs tends to ignore the underlying causes of their unhappiness and reasons for distress.

TABLE 10: ANNUAL INCIDENCE OF SPECIFIC MENTAL DISORDERS PER 100 PERSON-YEARS OF RISK, BY SEX, 1992

Disorders	Men	Women	Total
Major depressive disorders	1.10	1.98	1.59
Panic disorders	0.30	0.76	0.56
Phobic disorders	2.33	5.38	3.98
Obsessive-compulsive disorders	0.39	0.92	0.69
Drug abuse/dependence	1.66	0.66	1.09
Alcohol abuse/dependence	3.67	0.61	1.79
Total	9.45	10.31	9.70

Source: World Health Organization (1992a).

4. WHAT CAN BE DONE

The scope of this paper is limited to a discussion of older women's health problems, even though the older adult population, particularly women, needs more than just accessible health care. Moreover, current health systems are often inadequately prepared to cope with their identified chronic health problems, including cancer, circulatory diseases, and mental health problems. Formal institutions such as social security, pensions, and health insurance do not offer sufficient financial support for older people, and in fact cover only a small portion of the population in a few developing countries. Thus establishing or expanding social service systems will be needed to achieve a minimal level of well-being. This section first reviews options for the prevention and treatment of selected chronic diseases prevalent in women older than age 50, then discusses implementation strategies appropriate in different settings.

Because most health services for women are mainly geared toward pregnancy and birth, they do not address all the primary health needs of women in older age groups. Services are often inaccessible for rural populations or insufficient for urban dwellers, and quality inadequate.

The phenomenal increase in the number of older women in developing countries brings about the growing need for appropriate health care for the elderly. The proportion of disabled persons among the population older than 65 in developing countries is estimated to exceed 50 percent (Foner 1989). Increasing rates of chronic conditions such as heart disease and diabetes will require adopting cost-effective strategies to prevent and manage these diseases.

A STRATEGIC APPROACH FOR PREVENTION OF MORTALITY AND MORBIDITY

Mid-life and older women could be treated as various, distinct age-group cohorts[6]. Cohort planning may focus on needs and priority problems identified by available surveys or data, if care is taken to consider differences between urban and rural female cohorts. Rural areas need an emphasis on risks of undernutrition and prevention of infection, while urban areas need an emphasis on health education for management of chronic diseases.

General actions required are to:

- Establish public policy to re-direct health personnel to those locations where there are a lack of minimal health services and implement policies aimed at reduction of inequality in the distribution of health resources to the various areas and population segments. For example, in Israel the Ministry of Health actively promotes home health care and provides financial assitance to the major sick fund (Kupat Holim) to develop home health care programs.
- Promote community participation in older women's health care and social services. For example, HelpAge India has emphasized educating and recruiting young people and children to work with older people and to take responsibility for fund-raising programs. This concept has had similar success in the varying cultures of Sri Lanka, Kenya, and Colombia. The Center for the Welfare of the Aged also in India, promotes community-based services such as day centers for elderly people often run by the elderly themselves, attend to health needs of the elderly. The objective of the day center is self-help. The poorest elderly people are provided with a lunch, again an operation managed by the elderly themselves (Tout 1989).
- Disseminate the concepts of chronic disease prevention via mass media and encourage the involvement of older persons to take responsibility for becoming the principal promoters of their own health. Education about reducing health hazards and changing social perception is the key to limiting some chronic diseases such as lung cancer, for example, studies show that morbidity associated with cigarette smoking is reduced after five years of smoking cessation. Health education directed at younger women will be even more effective as these women age.[7] For example, antismoking and nutrition education campaigns on

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6 Defining all women over 50 as one group can lead to serious overshooting in policy making. There is a major difference between "young" elderly (50-70) and "old" elderly. Major problems occur among the very old, while younger elderly are often perfectly capable in providing for their own needs. We need to recognize such a distinction, but within the context of the demographic trends in developing countries, the priority should be on designing a strategy to provide for the health care of the elderly as a cohort group.

7 There is evidence that women report more problems of ill-health across all age categories. Education has a strong positive effect on health-related behaviors, but education effects seem to dissipate as people age. That socioeconomic influences decline with age is potentitally important. It suggests that policies focusing on the health and health behaviors of prime-age adults may be the most effective

stregthening dietary practices might use various forms of media: radio, television, posters to include middle-age women.

- Provide training to health care personnel on the problems of older women. Health personnel should learn to provide health information in such a way as to promote and stimulate community attitudes, beliefs, and practices which are appropriate. For example, the National Council on Ageing in Jamaica recommended that training in geriatrics be mandatory for all staff employed in institutions for the elderly (Tout 1989).
- Promote the participation of elderly women in maintaining their own health, by educating them about the long-range value of personal hygiene, proper diet, exercise and the need to seek medical help in a timely fashion.
- Promote developing suitable facilities for the elderly, such as designing and adapting housing to accommodate the functional capacities of the elderly, thus promoting their mobility, comfort, and participation in community activities. Furthermore, appliances such as spectacles, hearing aids, dentures, and crutches could be made accessible, available, and affordable.
- Undertake research to identify needs specific to a variety of age groups and delineate the relationshiop between the changing role as women age and potential physical and mental health problems.

STRATEGY FOR INTEGRATED MANAGEMENT OF CHRONIC DISEASES

To address the increase in chronic diseases, each country should develop strategies for preventing and managing priority chronic diseases such as cancer and cardiovascular and cerebrovascular diseases. These prevention strategies should be integrated because most chronic diseases, such as cardiovascular diseases, diabetes, and hypertension have common risk factors.

A blueprint for global cancer control is not feasible. Each country needs to decide on its own policies, strategies, and objectives. The emphasis, however, needs to be on prevention. Political support is critical in adopting a prevention-oriented cancer control policy and in avoiding an overemphasis on high-technology hospital-based treatment. Thus each country needs to assess the trends and factors responsible for the predominant types of cancers through a cancer surveillance system for monitoring incidence and mortality of cancer. It then needs to develop a plan for cancer control in the context of a national plan for health, including prevention, screening, treatment, and pain relief. It must also train health workers in their role in cancer control, improve public education on the major risk factors of cancers, and introduce legislation and commit political support to reduce or eliminate the dangers of those factors.

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way to improve health of adults (Strauss et al. 1992).

Health programs are most effective when delivered in the community, near where a population lives. Where women's labor force participation is high, the worksite is an ideal place to provide health education programs. Blood pressure monitoring, smoking cessation programs, cervical and breast cancer programs could be incorporated in workplaces with high concentrations of women workers and presented as a worker benefit. Employees need to be made aware of the cost effectiveness of these programs in reducing loss of work time.

Primary prevention involves minimizing or eliminating exposure to cancer-causing agents. Primary prevention programs are most effective if targeted at younger populations. For example, an antismoking campaign is the single most cost-effective way to prevent lung cancer. Exposure to carcinogenic chemicals in the workplace causes cancers of the lung, bladder, and blood (leukemia). Correcting workplace conditions by reducing exposure to chemicals can reduce the onset of (occupational) diseases.

Primary prevention, such as cessation of smoking, reduction of alcohol intake, and maintenance of appropriate diet, needs to be initiated in young adulthood. In addition to mass education, face-to-face health education is important to increase patients' knowledge of self-care to prevent complications of diabetes and to care for hypertension.

Secondary prevention involves screening apparently healthy people to detect cancer in early or precursor stages when treatment is most effective, and is available for both cancer of the cervix and breast. The cost effectiveness of a secondary prevention program depends on the incidence of the disease, the technical feasibility of screening and treatment at early stages, and the possibility of targeting high-risk groups. Well-planned and managed programs of cervical and breast cancer screening using Pap smear mammography directed at high-risk women may be cost effective in areas of high incidence. These programs can be integrated within other services targeted to mid-life and older women. Presently, rural poor women who are most at risk of developing cancer of the cervix, however, are most likely not to have access to such screening. Screening for cervical cancer should be made available to rural women and those older than 40 rather than only to urban populations. This implies upgrading rural clinics and rural health personnel specifically to provide these services. Settings in which this could be feasible will be discussed in the next section.

Estimates of the cost effectiveness of cervical cancer screening, in terms of percent of the annual gross product per capita per year of life gained, range from 70% to 300% per undiscounted death prevented or 4% to 18% per year of life gained (Barnum and Greenwood 1991). Cost-effectiveness estimates are higher in countries with higher rates of cervical cancer and in those with identifiable high-risk groups. But, all too often screening is

initiated without considering the need to adequately cover women at risk -- for example screening given to young women while older women are insufficently covered.

A study in Chile comparing two strategies for cervical screening concluded that less frequent screening but with high coverage of the population at risk is a more cost-effective strategy (Miles 1991). This suggests that a step-by-step approach to the introduction and expansion of screening is recommended. In countries with limited resources, the aim should be to screen every woman over 40 years of age once in her lifetime. When more resources are available, the frequency of screening should be increased to once every ten years for women age 35 to 55. If resources permit and a high proportion of the target group is being screened, then screening should be first extended to women up to 60 years of age. Once programs have been extended, screening is indicated for women older than 60 who have never been screened. Annual screening is contraindicated for all country and all age groups (World Health Organization 1992a).

Breast examination using mammography is much less cost-effective than cervical cancer screening. The cost per year of life gained from mammography ranges from 100% to 200% of the annual gross national product per capita (Barnum and Greenberg 1991).

The role of treatment in a cancer control strategy depends upon the technology and level of health service available in developing countries. Case management of cancer is not cost effective if treatment is concentrated at high-level tertiary care. In low-income countries, priority needs to be given to developing hospice programs which provide pain relief, develop alternatives to inpatient care, and use paraprofessionals and community nurses without investing significant resources in secondary or tertiary care.

Osteoporosis cannot be prevented and is too expensive to treat as a public health intervention. Estrogen therapy given to appropriately selected women and under careful surveillance at and after menopause can delay the onset of bone loss and will lead to a lower risk of fractures. However, experts still debate whether estrogen therapy is cost-effective and should be recommended in developing countries. Moreover, more research is needed to identify high-risk women before treatment can be considered as a cost-effective public health measure.

Some preventable disabling conditions affecting the elderly, such as falls resulting in hip fractures, are often caused by inappropriate medication. Inadequate and inappropriate care, overmedication, and insufficient monitoring of drug side effects often are causes of disability in the elderly (Doty 1987). Some research on hip fracture suggest falls resulting in fracture might be prevented in significant number by alternative drug treatment for other chronic diseases (Doty 1987).

Noninsulin-dependent diabetes is frequently associated with coronary heart disease and hypertension, and other chronic diseases. These diseases also have common risk factors such as use of tobacco, and unbalanced diet, and alcohol abuse. This makes it necessary to develop an integrated program for prevention and control (stressing good nutrition, avoidance of obesity, increased physical activity, and reduction of smoking and alcohol consumption). A broad strategy tackling a wide range of chronic diseases, and emphasizing modification of high-risk behaviors through mass health education has the potential to reduce the high direct and indirect costs of the complications of diabetes and hypertension. Surveys have indicated that educating patients is effective in reducing hospital occupancy by diabetic patients. Similarly education in self-care has led to a 78% decrease in hyperglycemic comas and a 75% reduction in below-knee amputations (Vaughan 1991). Appropriately trained personnel are the key for such an education program. Properly designed health education materials and standard protocols at the primary and secondary level for face-to-face education of known diabetics and patients with hypertension also need to be developed.

At national and regional levels, surveillance of disease mortality needs to be included as a critical element of a comprehensive health care strategy for women. As cost data become available, better cost- effectiveness estimates could be used to set priorities for programs in specific countries. Data collected need to be disaggregated by sex. To date, not only are data not always adequately separated by sex, but age breakdowns and urban-rural classifications are often inadequate. There is also a need to improve linkage or feedback with the producers of statistics and the users (policymakers in and outside government). More resources are needed to collect, analyze, and disseminate statistics and data on the health needs of women in general and elderly women in particular.

TYPOLOGIES FOR DESIGNING PROGRAMS APPROPRIATE TO LOCAL CONDITIONS

The health problems of women older than age 50 must be viewed in the light of social, work-related, cultural, and economic factors to better understand the aging process, establish measures to adjust and prevent these problems, and deal with the problems more appropriately and effectively. Given that most developing countries are increasingly facing fewer resources to provide for all the necessary health services needed by their people, strategies are needed mobilize existing resources so as to best cope with the increasing needs of older populations.

Ways to improve older women's health and well-being vary according to the particular country's economic, epidemiological, demographic, infrastructural, and cultural conditions that influence the feasibility and effectiveness of the available public health interventions. It is not possible to provide a blueprint for the health care of older women (or for the older population in general). This section discusses approaches in three different settings for which planners and managers can start assessing needs and implement a plan for the health care of older women.

Setting A:

This setting includes the low-income countries in Africa, Asia, and Latin America and the Caribbean, such as Kenya, Nigeria, Pakistan, India, Egypt, and Bolivia, where government hospitals and clinics are often insufficient even for the provision of acute medical care and maternal health care. Moreover, primary care to meet basic health care needs in rural areas is scarce or nonexistent. Private providers consist mainly of religious nongovernmental organizations in Africa and private physicians and unlicensed practitioners in South Asia. Public spending on health in these countries is skewed toward high-cost hospital services that benefit mainly the better-off urban populations. Furthermore, national policies to assist the elderly and community awareness of their needs are lacking. The elderly tend to be isolated, undernourished, and dependent on extended families.

Priority: Increase government and public awareness of the aging population and develop a national strategy to focus on older women in rural and urban poor areas (see box 4).

Setting B:

This setting includes most of the middle-income countries in Asia, Latin America and the Caribbean and the Middle East. Both public and private services are available but are underutilized. Primary care services are available but are poor in quality and scarce in rural areas. There is little recognition of the needs of the elderly, and there are too few government and private programs designed to help the elderly. Resources are invested disproportionally in institutional care rather than in services for the community and home. There is a lack of rehabilitation, physical therapy, and mental health care. Programs for health promotion and education are minimal, and those that exist are not geared to the specific needs of the elderly. Home care and home help services are not recognized as a "right" and hence are not included in the country's budget. Social insurance is available only for those employed by the government or major employers. There is also a paucity of legislation defining needs, entitlement, and mandated services for the elderly.

Attitudes toward the elderly are changing as result of urbanization and modernization. Furthermore, rural areas will have a higher proportion of elderly due to migration of young workers to urban areas. Urban housing problems will worsen.

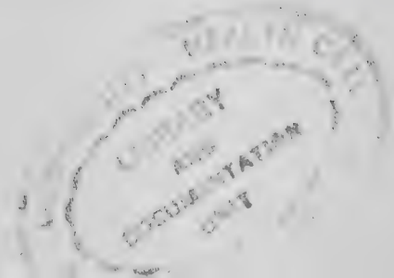
People in general are unaware of the responsibility for improving their own health. Insufficient attention is given to adequate nutrition for the elderly. Arteriosclerosis is responsible for much disability and death in later life. Recognition of the necessity for health promotion programs is growing but systems are not yet widespread.

Priority: Orient government and the private sector to regard all efforts to improve later life as a medium-term investment in human capital (see box 5).

Setting C:

This setting includes the former socialist countries in eastern and central Europe, the former USSR, and China. These countries have an extensive network of hospitals, rehabilitation facilities, and public health facilities. The health care delivery system is inefficient and ineffective. Governments have been slow to regulate workplace safety and environmental pollution and have put little emphasis on health promotion through campaigns against unhealthy behaviors such as heavy cigarette and alcohol consumption. In recent years the collapse of social safety nets has led to problems in providing assistance to the disabled and to people unable to support themselves. For example, in China the collapse of cooperative medical insurance has led to deterioration in the provision of preventive health services.

Priority: Promote and maintain independent functioning of the elderly (see box 6).



BOX 4: Policy Directions and Programs for Countries Described in Setting A

Community-Based Services

- Promote traditional family attitudes toward the elderly, particularly older women. Maintain and extend customs by which the elderly use some of their traditional roles in the community.
- Increase the capacity and role of women in identifying, promoting and valuing positive health behavior, such as adequate nutrition and hygienic measures.

Education and Training

- Incorporate information about the normal aging process in mass literacy campaigns.
- Introduce geriatrics in undergraduate medical education.
- Train community health workers in the care of the elderly with a focus on family participation.

Organization and Finance

- Establish national-level leadership focused on the needs of the elderly.
- Establish the objectives and structure for health promotion and health care of the elderly.

Research and Evaluation

- Evaluate policies and health care objectives to meet changes expected by 2010.

Improving health programs for older women

- Initiate health education programs under government and voluntary- agency sponsorship with emphasis on promoting positive attitudes toward the elderly.
- Develop cadres of health professional and paraprofessional workers committed to working with the elderly.
- Encourage nongovernmental organizations to initiate community programs oriented toward inclusion of older women.
- Use primary care as the basic approach, and existing village women's organizations as the entry points, for chronic disease prevention programs.
- Educate women on the importance of their own good nutrition and behavioral risk factors.

BOX 5: Policy Directions and Programs for Countries Described in Setting B

Community-based services (focus on prevention)

- Increase emphasis on community-based programs for health care for the elderly.
- Institutionalize measures to assist local authorities and voluntary organizations to expand needed services for the elderly.
- Emphasize health promotion and disease prevention in community health, social services, and occupational settings.
- Promote an interdisciplinary approach to services, by including medical, social, and psychological services in the care for older women.
- Provide secure and suitable housing such as rooming units for the elderly to enable them to stay close to their families.
- Encourage and coordinate mutual help groups so that the elderly can rely to some extent on their own resources and on each other.

Education and Training

- Introduce into health workers' curricula the safe and appropriate dosage of drugs for the elderly.

Organization and Finance

- Provide the needy elderly with some form of health insurance.

Research and Evaluation

- Expand surveillance data gathering to document older women's health and health care needs.
- Evaluate ongoing programs directed at improvement of the health of older women.

Improved Health Programs for Older Women

- Educate the adult working population on health promotion measures such as adequate nutrition and physical activity.
- Introduce health counselling and screening programs,e.g. hypertension at the work place.
- Implement cervical cancer screening programs according to local conditions.
- Establish day care centers and homes for the aged.
- Introduce palliative measures and hospice care for the management of terminally ill patients.
- Promote health education programs at the workplace.
- Conduct vision screening at the workplace and in the community.
- Educate women on the safe and effective use of drugs such as antidepressants and tranquilizers, particularly if available without a physician's prescription.
- Promote compliance with nutritional counseling and prescribed drugs.

BOX 6: Policy Directions and Programs for Countries Described in Setting C

Community-based services (focus on prevention and self care)

- Develop a more comprehensive strategy for women's health, with particular attention to mental health and the prevention and treatment of chronic diseases.
- Increase focus on responsibility for self-care in preventing chronic diseases.
- Redirect focus from hospital based to community-based care for the elderly.
- Promote the strengthening of a spectrum of support services--home helps, home nursing care, nutritional programs.
- Promote suitable housing.
- Influence women's groups to actively participate in planning for the care for older women.
- Emphasize preventive measures against health hazards at work.
- Reenforce positive health behaviors such as physical activity that currently exist in the society.
- Develop social safety nets.

Education and Training

- Educate physicians in geriatrics and gerontology.
- Set Standards and train nurses for home health care.
- Educate the public to want home health care.
- Train health workers in basic rehabilitation skills aimed at mobilizing elderly.
- Integrate retirees into productive community activities through training programs.
- Incorporate volunteer activities into schooling and make it a part of adult life.

Organization and Finance

- Decentralize management and the provision of health services.
- Coordinate public and private insurance so that benefit packages and reimbursement approaches are comprehensive and standardized for the vulnerable age groups.
- Explore the introduction of compulsory "dependence" insurance levied on industry and employed, including self-employed.

Research and Evaluation

- Formulate a monitoring system to identify and document the social and health status of women.
- Undertake research to identify needs specific to a variety of age groups, and delineate the relationships between the changing role of women as women age and potential physical and mental health problems.

Improve Health Programs for Older Women

- Implement community based screening for major diseases, e.g cancers of the cervix and breast, hypertension.
- Promote experimention with alternative community care models such as day care and short hospital stays tailored to the elderly.
- Conduct vision screening at work place and in community.
- Improve efficiency of chronic care service management with options for day care and day hospital.
- Educate women to improve self-help skills to manage chronic diseases such as diabetes and hypertension.
- Provide systematic education programs for women on changing needs of aging, in nutrition, environmental health, smoking and alcohol abuse, oral hygiene.
- Educate women to increase their awareness of the impact of working conditions on their health.
- Encourage middle-aged women to participate in sports.
- Educate women on stress management, side effects of drug misuse, and possible addiction to tranquilizers, sedatives, and antidepressants.
- Introduce palliative measures and hospice care for the management of terminally ill patients.
- Establish geriatrics functional assessment in health care facilities.

5. CONCLUSION

By 2020, some 684 millon women older than age 50 will live in developing countries, 150 percent more than today. Today, 109 million disability-adjusted life-years are lost for women over 50 as a result of disease. Their health problems are distinctly different from those of younger women, for whom interventions are correctly concentrated around pregnancy-related complications. For women, beyond their reproductive age, the vast majority of health problems are chronic: cancer, cardiovascular diseases, arthritis, diabetes. Tertiary treatment is often not available or prohibitively expensive. A health strategy for mid-life and older women needs to focus on prevention early in life, screening of high-risk groups, and health education to promote self-help. Such a strategy is likely to be country specific, since disease patterns vary by level of development and between urban and rural populations. In all cases, though, the health problems of older women, and indeed of the population as a whole, can be addressed much more effectively if adequate health monitoring systems are put in place that provide information on morbidity and mortality patterns categorized by age, sex, and region.

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